

SCISSOR CAP AND SCISSORS

BACKGROUND OF THE INVENTION

The present invention relates to scissors and to a scissor cap that enables the usage of
5 a pair of scissors while covering the blades of the scissors.

Registered Utility Model No. 3070507 describes a pair of scissors that improves safety when the scissors are being used.

More specifically, referring to **Fig. 9**, a pair of scissors **51** includes two scissor pieces
52. Each scissor piece **52** includes a blade **53** and a handle **54**. A pin **55** supports the two
10 scissor pieces **52** so that the scissor pieces **52** may be opened or closed, that is, moved away
from or toward each other. A cover **56** is formed integrally with one of the handles **54** (i.e.,
handle **54a**). The cover **56** includes a hollow portion **57**. When the other one of the
handles **54** (i.e., handle **54b**) is moved away from the handle **54a**, the blade **53b** connected to
the handle **54b** enters the hollow portion **57**. The other blade **53a** has a distal end covered
15 by a cap **58**. To use the scissors **51**, the two scissor pieces **52** are opened. In this state, an
object, such as paper, is placed between the blade **53a** and the opening of the hollow portion
57. The two scissor pieces **52** are then closed and opened to cut the object. The cover **56**
prevents a person's finger from getting caught between the blades **53a** and **53b** when using
the scissors **51**.

20 There are known scissor caps used to improve the safety of the scissors when the
scissors are not being used. The cap accommodates the scissor blades in a closed state.
Utility Model Laid-Open Publication No. 4-32667 describes an example of such scissors that
improve safety when the scissors are not being used.

More specifically, referring to **Fig. 10**, a pair of scissors **61** includes two scissor
25 pieces **62**. Each scissor piece **62** includes a blade **63** and a handle **64**. A pin **65** supports
the two scissor pieces **62** so that the scissor pieces **62** may be opened or closed, that is, moved

away from or toward each other. A spring 66 is arranged in the scissors 61 near the pin 65 to urge the two scissor pieces 62 in an opening direction. The scissors 61 are entirely accommodated in a case 67 when not being used. An opening 67a extends through one
30 longitudinal side of the case 67. Openings 67b and 67d respectively extend through the two lateral sides of the case 67. The opening 67b functions to expose a slip-guard (not shown) arranged on an outer surface of one of the handles 64 (i.e., the upper handle 64a as viewed in Fig. 10). A guide 67c is arranged on the inner wall of the case 67 to guide the movement of the handle 64a, which has the slip-guard, in the longitudinal direction of the case 67.

35 As shown in the state of Fig. 10, the case 67 entirely covers the scissors 61 when the scissors 61 are not in use. From this state, to use the scissors 61, the handle 64a, the slip-guard of which is exposed from the opening 67b, is moved along the guide 67c in the longitudinal direction of the case 67 (toward the left as viewed in Fig. 10). As a result, the other handle 64b, which is urged toward the inner wall of the case 67 by the urging force of
40 the spring 66, is released from the inner wall and popped out of the opening 67d. Further, the two blades 63 project out of the case 67 from the opening 67a. When the handle 64b is in contact with the wall of the case 67, the two blades 63 are overlapped with each other and closed. However, when the handle 64b pops out of the opening 67d, the blades 63 are opened to enable cutting. Accordingly, an object is cut by moving the handles 64a and 64b
45 toward each other against the urging force of the spring 66 and away from each other with the urging force.

In the scissors 51 of Registered Utility Model No. 3070507, the cover 56 is formed integrally with the handle 54a, and the cover 56 cannot be removed from the scissors 51. That is, the cover 56 is not removable from the scissors 51 and is used exclusively for the
50 scissors 51. Accordingly, the cover 56 cannot be used for other scissors. Further, in the scissors 51, the other blade 53a is always exposed. Accordingly, it is believed that further

improvements may be made to the scissors **51** from the perspective of safety.

Further, in the scissors **61** of Utility Model Laid-Open Publication No. 4-32667, the entire scissors **61** are accommodated in the case **67**, and the case **67** cannot be used for other
55 scissors. In addition, when using the scissors **61**, the two blades **63** project out of the case **67** and are exposed. Accordingly, it is believed that further improvements may be made to the scissors **61** from the perspective of safety.

SUMMARY OF THE INVENTION

60 One aspect of the present invention is a cap for a pair of scissors. The scissors includes two scissor pieces, each having a handle and a blade provided with a cutting edge. A pin connects the two scissor pieces so as to enable the scissor pieces to be opened and closed. The cutting edges of the two blades intersect each other at an intersecting point that moves along a predetermined movement path when the two blades are opened and closed.

65 The cap includes a cap body for accommodating the two blades. An engaging portion is detachably engaged with at least one of the pin and either one of the scissor pieces to keep the two blades accommodated in the cap body. A slit is formed in the cap body. The slit is located at a portion of the cap body, which accommodates the two blades, corresponding to at least part of the movement path.

70 A further aspect of the present invention is a pair of scissors including two scissor pieces, each having a handle and a blade provided with a cutting edge. A pin connects the two scissor pieces so as to enable the scissor pieces to be opened and closed. The cutting edges of the two blades intersect each other at an intersecting point that moves along a predetermined movement path when the two blades are opened and closed. A cap

75 accommodates the two blades. The cap includes an engaging portion detachably engaged with at least one of the pin and either one of the scissor pieces to keep the two blades accommodated in the cap. A slit is formed in the cap. The slit is located at a portion of the cap, which accommodates the two blades, corresponding to at least part of the movement path.

80 Other aspects and advantages of the present invention will become apparent from the following description, taken in conjunction with the accompanying drawings, illustrating by way of example the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention, together with objects and advantages thereof, may best be understood
85 by reference to the following description of the presently preferred embodiments together
with the accompanying drawings in which:

Fig. 1 is a plan view showing a scissor cap according to a first embodiment of the
present invention in a state accommodating the blades of a pair of scissors;

Fig. 2 is a partially cutaway side view showing the scissors of **Fig. 1**;

90 **Fig. 3(a)** is a plan view showing the scissor cap of **Fig. 1**;

Fig. 3(b) is a cross-sectional view taken along line 3b-3b of Fig 3(a);

Fig. 4 is a plan view showing the scissors and the scissor cap of **Fig. 1** before the
blades of the scissors are accommodated in the scissor cap;

Fig. 5 is a plan view showing the scissor cap of **Fig. 1** in a state accommodating the
95 two blades of the scissors in an overlapped and closed state;

Fig. 6(a) is a partially cutaway plan view showing the vicinity of the pin of the
scissors in a state in which the blades are accommodated in a scissor cap according to a
second embodiment of the present invention;

Fig. 6(b) is a partially cutaway side view showing the vicinity of the pin of the
100 scissors of **Fig. 6(a)**;

Fig. 7(a) is a plan view showing a scissor cap according to a third embodiment of the
present invention;

Fig. 7(b) is a side view showing the scissor cap of **Fig. 7(a)**;

Fig. 8 is a plan view showing the scissor cap of **Fig. 7(a)** in a state accommodating
105 the blades of a pair of scissors when cutting a piece of paper;

Fig. 9 is a plan view showing a pair of scissors with a prior art cover; and

Fig. 10 is a plan view showing a pair of scissors with a prior art case.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A first embodiment according to the present invention will now be discussed with

110 reference to **Figs. 1 to 5.**

Referring to **Figs. 1 and 4**, in the first embodiment, a pair of scissors **11** includes two scissor pieces **12**. Each scissor piece **12** includes a metal (e.g., stainless steel) blade **13** and a wooden handle **14** connected to the blade **13**. The blade **13** is located on the distal side of the scissors **11** and the handle **14** is located on the basal side of the scissors **11**. The blade
115 **13** and the handle **14** do not have to be made of the above materials and may be made of any material. A pin **15** pivotally supports the scissor pieces **12** at the longitudinally middle portion of the scissor pieces **12** to enable the scissor pieces **12** to be moved away and toward each other, or to be opened and closed. Referring to **Fig. 2**, the pin **15** extends through the two scissor pieces **12** and has two round heads **15a** and **15b** located on opposite sides of the
120 pin **15**. The head **15b** is crimped to fasten the two scissor pieces **1** to each other so that the scissor pieces **12** may be opened and closed. The diameter and thickness of the head **15a** are greater than those of the head **15b**.

Referring to **Figs. 1 and 4**, a projection **16** projects from one of the two blades **13**, or a first blade **13a**. The projection **16** is formed integrally with the first blade **13a** and located
125 on the basal side of the pin **15**. A slide groove **17** extends through the other one of the two blades **13**, or a second blade **13b**, at a location corresponding to the projection **16**. When the scissor pieces **12** are opened and closed, the projection **16** is guided along the slide groove **17**. Accordingly, the slide groove **17** restricts the range in which the two scissor pieces can be opened.

130 Referring to **Figs. 1 and 2**, the two handles **14** each have a semispherical portion **14a**, an opposing surface **14b**, and a stopper **14c**. The semispherical portion **14a** is located on the outer side of the handle **14**, the opposing surface **14b** opposes the opposing surface **14b** of the

other handle **14**, and the stopper **14c** projects from the opposing surface **14b**. When the two scissor pieces **12** are closed, the stoppers **14c** hit each other and produces a sound. That is, the handles **14** produce sounds using the principle employed by a castanet. Two urging members, or coil springs **18**, are arranged between the opposing surfaces **14b** of the handles **14**. The ends of the two coil springs **18** are arranged on each side of a hypothetical plane that includes the edges of the blades **13a** and **13b** and are separated from the hypothetical plane by the same distance (refer to **Fig. 2**). The two coil springs **18** urge the two scissor pieces **12** in the direction in which the scissor pieces **12** are opened. Accordingly, the two scissor pieces **12** are opened when a force for closing the scissor pieces **12** is not applied thereto. In such a state, the two scissor pieces **12** are opened to a maximum angle, which is restricted by the slide groove **17**.

A scissor cap **19**, which accommodates the two blades **13a** and **13b** of the scissors **11** will now be discussed with reference to **Fig. 3**.

Referring to **Figs. 3(a) and 3(b)**, the scissor cap **19** has a tubular cap body **20**, which includes a distal opening **20a** and a basal opening **20b**. The cap body **20** is made of a transparent synthetic resin. However, the cap body **20** does not have to be made of resin and may be made of any material, such as wood.

The cap body **20** has curved sides that partially narrow the cap body **20**. Further, the cap body **20** includes two side walls **21** extending along the sides of the cap body **20** with respect to the lateral direction of the cap body **20**. Two cover walls **22** extend between the side walls **21** in a direction perpendicular to the cap body **20**. The lateral direction of the cap body **20** refers to a direction parallel to the axis of the pin **15**. The direction perpendicular to the cap body **20** refers to a direction perpendicular to the axis of the pin **15** (the lateral direction in **Fig. 1**). The basal portions of the two side walls **21** are curved toward each other. The cover walls **22** are plate-like and have lateral edges shaped in

correspondence with the side walls **21**. The distal sides of the two cover walls **22** are curved outward from a hypothetical plane **P**, which connects the distal ends of the side walls **21**. A
160 distal slit **23** extends longitudinally straight through the center of each cover wall **22** from the distal end to the middle portion of the cover wall **22** so as to divide the cover wall **22** into two halves. The distal slit **23** has a uniform width with respect to the longitudinal direction.

The basal sides of the two cover walls **22** each include an engaging slit (engaging portion) **K**. The pin **15** of the scissors **11** is detachably engaged with the engaging slit **K**.
165 The engaging slit **K** includes a guiding portion **24**, which is located at the basal side of the engaging slit **K**, a cutout portion **26**, which is located at the distal side of the engaging slit **K**, and a holding portion **25**, which is located between the guiding portion **24** and the cutout portion **26**.

The guiding portion **24** extends longitudinally through the center of each cover wall
170 **22** from the basal end thereof. The guiding portion **24** widens towards the basal end of the cover wall **22**. The width of the basal end of the guiding portion **24** is greater than the diameter of the head **15a** of pin **15** of the scissors **11**. The width at the distal end of the guiding portion **24** is slightly smaller than the diameter of the head **15a**.

The holding portion **25** is formed by cutting out the distal side of the guiding portion
175 **24** in a semicircular manner. The diameter of the holding portion **25** is greater than the width of the distal side of the guiding portion **24** and about the same as the diameter of the head **15a** of the pin **15**. The cutout portion **26** extends longitudinally through the center of each cover wall **22** from the distal side of the holding portion **25** to the middle portion of the cover wall **22**. The width of the cutout portion **26** is about the same as that of the distal slit
180 **23**. Each cover wall **22** is divided into two halves by the distal slit **23**, the guiding portion **24**, the holding portion **25**, and the cutout portion **26**. The portion of the cover wall **22** extending between the distal slit **23** and the cutout portion **26** connects the halves to each

other.

A retaining space **S** is defined in the cap body **20** between the two side walls **21** and the two cover walls **22**. The blades **13a** and **13b** of the scissors **11** are retained in the retaining space **S** (refer to **Fig. 1**). Due to the shape of the side walls **21**, the retaining space **S** is narrow near the distal side of the holding portion **25**. In the scissors **11**, the portion surrounding the location where the pin **15** supports the scissor pieces **12** does not move in a direction substantially perpendicular to the longitudinal direction of the scissors **11** when opening and closing the scissor pieces **12**. This enables narrowing of the vicinity of the distal side of the holding portion **25**, which is engaged with the head **15a** of the pin **15** when the blades **13a** and **13b** are retained in the scissor cap **19**.

The operation of the scissors **11** when retaining the blades **13a** and **13b** in the scissor cap **19** will now be discussed with reference to **Figs. 1, 4, and 5**.

When the scissor pieces **12** are opened by the urging force of the two coil springs **18** (the state shown by the solid lines in **Fig. 4**), to close the two scissor pieces **12** (the state shown by the broken lines in **Fig. 4**), the handles **14** are closed against the urging force of the coil springs **18**. In this state, the scissor cap **19** is moved to insert the blades **13a** and **13b** in the retaining space **S** of the cap body **20**. When doing so, the guiding portion **24** guides the head **15a** of the pin **15** of the scissors **11** to engage the head **15a** with the holding portion **25**. The guiding portion **24** functions to guide the pin **15** toward the distal side of the cap body **20**. The pin **15** is detachably engaged with the holding portion **25**, which functions to hold the pin **15** in the engaged state. When the guiding portion **24** guides the pin **15** to the holding portion **25**, the cutout portion **26** functions to facilitate widening of the guiding portion **24** and the holding portion **25** when the guiding portion **24** guides the pin **15** to the holding portion **25**. The engagement of the head **15a** of the pin **15** with the engaging slit **K**, which includes the guiding portion **24**, the holding portion **25**, and the cutout portion **26**, is

performed in a direction parallel to the opening and closing directions of the blades **13a** and **13b**.

210 Then, when the blades **13a** and **13b** are retained in the cap body **20** as shown in the state of **Fig. 5**, the force applied to the handles **14** against the urging force of the two coil springs **18** is released. As a result, the urging force of the two coil springs **18** opens the two handles **14**. This opens the scissor pieces **12** as shown in the state of **Fig. 1**. In this state, the two blades **13a** and **13b** come into contact with the inner surfaces of the side walls **21** of
215 the cap body **20**. Thus, the scissor pieces **12** are slightly closed against the urging force of the springs **18**, and the angle of the two scissor pieces **12** is slightly smaller than the maximum angle. Accordingly, the angle of the opened scissor pieces **12** in this state is determined by the distance between the inner surfaces of the two side walls **21**.

The scissors **11** may be used in this state with the blades **13a** and **13b** retained in the
220 scissor cap **19**. The operation of the scissors **11** in such state will now be discussed with reference to **Fig. 1**.

As shown in **Fig. 1**, when the blades **13a** and **13b** of the scissors **11** are retained in the cap body **20** and the scissor pieces **12** are opened, an object is inserted through the distal slit **23** of the cap body **20**. Then, the handles **14** of the scissors **11** are closed (moved toward
225 each other) against the urging force of the coil springs **18** and opened (moves away from each other) to cut the object. In this state, the head **15a** of the pin **15** in the scissors **11** is engaged with the holding portion **25** and prevent the blades **13a** and **13b** from falling out of the cap body **20**.

When the two blades **13a** and **13b** are opened or closed, an intersecting point **Cp** of
230 the respective cutting edges **131a** and **131b** move along a predetermined movement path **C**. The distal slit **23** of the cap body **20** lies along the movement path **C** when the blades **13a** and **13b** are held on the cap body **20**.

The movement path **C** extends straight. The distal slit **23**, which extends along the movement path **C**, has a uniform width. Referring to **Fig. 1**, the distal slit **23** extends from
235 the distal end of the cap body **20** to a portion of the cap body **20** corresponding to an initial intersecting point **Cpo** when the blades **13a** and **13b** are held in the cap body **20**. The initial intersecting point **Cpo** refers to the intersecting point **Cp** of the cutting edges **131a** and **131b** when the scissor pieces **12** are opened as wide as possible in the cap body **20**.

The removal of the blades **13a** and **13b** of the scissors **11** from the cap body **20** will
240 now be discussed with reference to **Fig. 5**.

As shown in **Fig. 5**, in a state in which the blades **13a** and **13b** are retained in the cap body **20**, the handles **14** of the scissors **11** are closed against the urging force of the coil springs **18**. In this state, while holding the handles **14**, the cap body **20** is pulled away from the blades **13a** and **13b**. This disengages the pin **15** of the scissors **11** from the holding
245 portion **25** of the cap body **20**. By further pulling away the cap body **20**, the guiding portion **24** guides the pin **15** as the blades **13a** and **13b** are removed from the cap body **20**.

The first embodiment has the advantages described below.

(1) The scissor cap **19** includes the engaging slit **K** and the distal slit **23**. The simple structure of the engaging slit **K** prevents the blades **13a** and **13b** from falling out of the
250 scissor cap **19**. Further, the engaging slit **K** (holding portion **25**) is engaged with and disengaged from the pin **15** to retain the blades **13a** and **13b** in the scissor cap **19** or remove the scissor cap **19** from the blade **13a** and **13b**. Accordingly, the scissor cap **19** is easily attached to and detached from the blades **13a** and **13b**. Further, the pin **15** may be disengaged from the engaging slit **K** (holding portion **25**) to remove the blades **13a** and **13b**
255 from the scissor cap **19** and retain the blades **13a** and **13b** of another pair of scissors **11** in the scissor cap **19**. Accordingly, the scissor cap **19** is a general-purpose cap that may be used for multiple scissors **11**. Further, when the blades **13a** and **13b** are retained in the scissor

cap 19, an object may be inserted in the distal slit 23 and cut. Accordingly, in addition to when the scissors 11 are not being used, the blades 13a and 13b may also be retained in the scissor cap 19 when using the scissors 11. This improves the safety of the scissors 11. Accordingly, the scissors 11 may be safely used even by a small child.

(2) The structure of the scissor cap 19, which includes the engaging slit K and the distal slit 23, is simple. In the prior art cover 56 for the scissors 51, the cover 56 is formed integrally with one handle 54a. Thus, the structure for improving the safety of the scissors 51 during usage is complicated. In comparison, the scissor cap 19 of the first embodiment improves the safety of the scissors 11 regardless of whether or not the scissors 11 are being used. Further, the cover 56 of the scissors 51 interferes with the cutting of an object since it is formed integrally with one handle 54a. However, the scissor cap 19 may be used with both blades 13a and 13b retained in the cover 56 and does not interfere with the cutting of an object. In the prior art case 67 for the scissors 61, the burdensome task of projecting the two blades 63 out of the case 67 from the opening 67a must be performed to use the scissors 61. In comparison, with the scissor cap 19, the scissors 11 may be used in a state in which the blades 13a and 13b are retained in the scissor cap 19. Thus, a burdensome task does not have to be performed to use the scissors 11. Furthermore, trimmings from a cut object may enter the cover 56 since the cover 56 is formed integrally with the handle 54a. In such a case, it may be difficult to remove the trimmings from the cover 56. In comparison, in the scissor cap 19 of the first embodiment, the blades 13a and 13b are removed from the scissor cap 19 by disengaging the pin 15 from the engaging slit K. Thus, trimmings may easily be removed from the scissor cap 19.

(3) The holding portion 25 is connected with the distal side of the guiding portion 24. Accordingly, the pin 15 is smoothly guided into the holding portion 25 when retaining the blades 13a and 13b of the scissors 11 in the scissor cap 19. This enables smooth movement

when retaining the blades **13a** and **13b** in the scissor cap **19**.

(4) The diameter of the holding portion **25** is greater than the width of the distal side
285 of the guiding portion **24**. This prevents the pin **15** of the scissor **11** from being easily
disengaged from the holding portion **25** when the pin **15** is engaged with the holding portion
25.

(5) The engaging slit **K** includes the cutout portion **26**. This enables the diameter of
the holding portion **25** to be greater than the width of the distal side of the guiding portion **24**.
290 In other words, the width of the distal side of the guiding portion **24** may be smaller than the
diameter of the head **15a** of the pin **15**. This prevents the pin **15** from being easily
disengaged from the holding portion **25**.

(6) The two side walls **21** of the cap body **20** are formed so that the basal side of their
middle portions is curved toward each other. Thus, the retaining space **S** is narrow near the
295 distal side of the holding portion **25**. This prevents the cap body **20** from moving loosely on
the blades **13a** and **13b**. More specifically, the blades **13a** and **13b** contact the curved
portions on the inner surfaces of the side walls **21**. Thus, when the scissors **11** are not being
used, the cap body **20** does not move loosely on the blades **13a** and **13b**.

(7) The lateral sides of the cap body **20** are curved so as to partially narrow the cap
300 body **20**. Thus, by holding the sides of the cap body **20**, the blades **13a** and **13b** of the
scissors **11** are smoothly retained in and removed from the scissor cap **19**. Further, the
narrowed cap body **20** decreases the material cost of the scissor cap **19**.

(8) The scissors **11** includes the pair of coil springs **18** that urge the two scissor pieces
12 away from each other in the opening direction. Thus, when cutting an object, only force
305 for closing the scissor pieces **12** is applied to the handles **14**. This smoothes the cutting
movements of the scissors **11**. Further, the urging force of the two coil springs **18** cause the
two blades **13a** and **13b** to contact the inner surfaces of the two side walls **21** of the cap body

20 when the scissors 11 are not being used. This prevents the blades 13a and 13b from moving loosely in the cap body 20. In addition, when the scissors 11 are not being used, the two blades 13a and 13b are not exposed from the distal slit 23. This further improves the safety of the scissors 11.

(9) The width of the guiding portion 24 increases at portions closer to the basal side. Thus, the width of the basal side of the guiding portion 24 is greater than the width of the distal side of the guiding portion 24, which is slightly less than the diameter of the head 15a of the pin 15. This smoothly guides the head 15a of the pin 15 into the guiding portion 24 from the basal side of the guiding portion 24.

(10) The scissor cap 19 is transparent. This eliminates a sense of awkwardness when using the scissors 11 with the blades 13a and 13b retained in the scissor cap 19.

(11) The handles 14 produce sounds using the same principle as a castanet and make the scissors 11 interesting.

A second embodiment according to the present invention will now be discussed with reference to Fig. 6.

To avoid redundancy, like or same reference numerals are given to those components that are the same as the corresponding components in the scissor cap 19 and scissors 11 of the first embodiment. The description centers on parts differing from the first embodiment.

Referring to Fig. 6(b), in the second embodiment, the pin 15 of the scissors 11 includes disk-like seats 30 and 31. The seat 30 is arranged between the head 15a and the second blade 13b, and the seat 31 is arranged between the head 15b and the first blade 13a. The distance between the opposing surfaces of the head 15a and the seat 30 and the distance between the opposing surfaces of the head 15b and the seat 31 are about the same as the thickness of each cover wall 22.

Further, as shown in Fig. 6(a) and 6(b), the cover walls 22 of the cap body 20 are

curved so that the cover walls **22** approach each other from the longitudinally middle portion to the basal side of the cap body **20**. Although not shown in the drawings, the laterally
335 middle portion of the cap body **20** between the deepest curved portion of the cover walls **22** and the basal end of the cap body **20** is substantially flat. The cap body **20** also includes the engaging slit **K**. The engaging slit **K** extends through the center of each cover walls **22** so as to laterally divide each cover wall **22** in half. The engaging slit **K** narrows toward the distal end. The pin **15** has a shaft portion **15c** that extends between the heads **15a** and **15b**.
340 The width at an intermediate portion of the engaging slit **K** is about the same as the outer diameter of the shaft portion **15c** between the seat **30** and the head **15a** and between the seat **31** and the head **15b**. The intermediate portion corresponds to the deepest curved portion of each cover wall **22**.

When retaining the two blades **13a** and **13b** in the scissor cap **19**, the shaft portion **15c**
345 of the pin **15** is inserted in the engaging slit **K** so that the opposing edges of the engaging slit **K** in the cover walls **22** are fitted between the seat **30** and the head **15a** and between the seat **31** and the head **15b**. In this manner, the shaft portion **15c** of the pin **15** is guided to the deepest curved portion of the cover walls **22** with the opposing edges of the engaging slit **K** in the cover walls **22** held between the seat **30** and the head **15a** and between the seat **31** and
350 the head **15b**. Then, the pin **15** (shaft portion **15c**) is engaged with the engaging slit **K** and held in the engaged state. In other words, contact between the outer surface of the shaft portion **15c** and the opposing edges of the engaging slit **K** in the cover walls **22** holds the shaft portion **15c** from a direction that is substantially perpendicular to the axis of the pin **15**. Further, the deepest curved portion of the cover walls **22** is held between the seat **30** and the
355 head **15a** and between the seat **31** and the head **15b**.

In addition to advantages (1), (2), (6) to (8), (10), and (11), the second embodiment has the advantages described below.

(12) The pin **15** of the scissors **11** includes the heads **15a** and **15b** and the seats **30** and **31**, and the scissor cap **19** (cap body **20**) includes the engaging slit **K**. When the pin **15** (shaft portion **15c**) of the scissors **11** is engaged with the engaging slit **K**, the pin **15** is prevented from being easily disengaged from the engaging slit **K**.

A third embodiment according to the present invention will now be discussed with reference to **Figs. 7 and 8**.

To avoid redundancy, like or same reference numerals are given to those components that are the same as the corresponding components in the scissor cap **19** and scissors **11** of the first embodiment. The description centers on parts differing from the first embodiment. In the following description of the cap body **20**, when the blades **13a** and **13b** are retained in the scissor cap **19** as shown in the state of **Fig. 8**, the cover wall **22** closer to the second blade **13b** is referred to as a second cover wall **22b**, and the cover wall **22** closer to the first blade **13a** is referred to as a first cover wall **22a**. Further, the side wall **21** closer to the second blade **13b** is referred to as a second side wall **21b**, and the side wall **21** closer to the first blade **13a** is referred to as a first side wall **21a**.

As shown in **Figs. 7(a) and 7(b)**, each cover wall **22** of the cap body **20** includes a guide **40**, which is connected with the basal side of the distal slit **23**. The guide **40** extends away from the distal slit **23** (i.e., movement path **C** of the intersecting point **Cp** of the two cutting edges **131a** and **131b**). More specifically, the guide **40** extends from the distal slit **23** toward a lateral side of the cap body **20**. The guide **40** is arcuate and extends toward the basal side of the cap body **20** from the scissor pieces **12** when the scissor pieces **12** are retained in the cap body **20**. The guide **40** guides a cut object, or paper **Pa** (refer to **Fig. 8**), from the distal slit **23** and outward of the cap body **20**. In the following description, the guide **40** on the second cover wall **22b** of the cap body **20** is referred to as a second guide **40b**, and the guide **40** on the first cover wall **22a** is referred to as a first guide **40a**.

In the cap body **20**, the second guide **40b** extends along the second cover wall **22b** to the first side wall **21a**. Further, the first guide **40a** extends along the first cover wall **22a** to the second side wall **21b**. Referring to **Fig. 7(a)**, when the second cover wall **22b** is viewed from above, the guides **40a** and **40b** are symmetrical to each other about a hypothetical line that divides the cap body **20** into two halves. The guides **40a** and **40b** are also symmetrical to each other in the same manner when the first cover wall **22a** is seen from above. Accordingly, among the two guides **40a** and **40b**, only the second guide **40b** will be described below.

As shown in **Fig. 7(a)**, the second guide **40b** is a slit extending from the basal side of the distal slit **23** in the second cover wall **22b** and formed by cutting out the second cover wall **22b** in a direction perpendicular to the second cover wall **22b**. The second guide **40b** extends from the basal side of the distal slit **23** to the edge of the first side wall **21a**. Further, as shown in **Fig. 7(b)**, in the first side wall **21a**, the second guide **40b** extends from the edge connected with the second cover wall **22b** to a position close to the first cover wall **22a**.

When the blades **13a** and **13b** are retained in the scissor cap **19** as shown in the state of **Fig. 8**, the second guide **40b** extends away from the second blade **13b** along the second cover wall **22b** from the basal side of the distal slit **23** to the edge connected with the first side wall **21a**. The first guide **40a** extends away from the first blade **13a** along the first cover wall **22a** from the basal side of the distal slit **23** to the edge connected with the second side wall **21b**.

As shown in **Fig. 7(a)**, the second guide **40b** is arcuate and extends toward the basal side of the cap body **20**. Further, the width of the second guide **40b** is the same as the width of the distal slit **23**.

The operation of the scissors **11** when the blades **13a** and **13b** are retained in the

scissor cap **19** will now be discussed with reference to **Fig. 8**.

When the blades **13a** and **13b** of the scissors **11** are retained in the cap body **20** with
410 the scissor pieces **12** in an opened state, a piece of paper **Pa** is inserted in the distal slit **23** of
the cap body **20**. Then, the handles **14** of the scissors **11** are closed and opened to cut the
paper **Pa**. The cut paper **Pa** is guided out of the cap body **20** from the distal slit **23** by the
guides **40a** and **40b**. More specifically, referring to **Fig. 8**, the cut paper **Pa** is cut into a
paper section **Pa1** and a paper section **Pa2**. The paper section **Pa1** on the second cover wall
415 **22b** (front side as viewed in **Fig. 8**) is guided along the second guide **40b** from the distal slit
23 and discharged out of the cap body **20** from the first side wall **21a**. In the same manner,
the paper section **Pa2** on the first cover wall **22a** (front side as viewed in **Fig. 8**) is guided
along the first guide **40a** from the distal slit **23** and discharged out of the cap body **20** from
the second side wall **21b**.

420 In this manner, the paper sections **Pa1** and **Pa2** are guided in opposite directions along
the cap body **20**. More specifically, the second guide **40b** guides the paper section **Pa1**
away from the second blade **13b**, and the first guide **40a** guides the paper section **Pa2** away
from the first blade **13a**. This is because at the point in which the two blades **13a** and **13b**
cut the paper **Pa**, the second blade **13b** pushes the paper section **Pa1** toward the first side wall
425 **21a**, and the first blade **13a** pushes the paper section **Pa2** toward the second side wall **21b**.

In addition to advantages (1) to (11) of the first embodiment, the third embodiment
has the advantages described below.

(13) The scissor cap **19** includes the guide **40**. The guide **40** guides the paper **Pa** cut
by the blades **13a** and **13b** (paper sections **Pa1** and **Pa2**) out of the cap body **20** from the
430 distal slit **23**. This prevents the paper sections **Pa1** and **Pa2** from remaining in the distal slit
23 and smoothly guides the paper sections **Pa1** and **Pa2** out of the cap body **20**. Further,
since the paper sections **Pa1** and **Pa2** do not remain in the distal slit **23**, the paper sections

Pa1 and **Pa2** are not bent in the distal slit **23**. When using conventional scissors, a person holds the scissors with one hand and supports the cut section of a piece of paper with the other hand. However, when using the scissor cap **19**, the guide **40** enables a person to cut a piece of paper **Pa** with the scissors **11** without having to support the cut paper sections **Pa1** and **Pa2** with one hand.

(14) The second guide **40b** guides the paper section **Pa1** from the distal slit **23** to the first side wall **21a** and out of the cap body **20**. In the same manner, the first guide **40a** guides the paper section **Pa2** from the distal slit **23** to the second side wall **21b** and out of the cap body **20**. Accordingly, the paper sections **Pa1** and **Pa2** are not discharged from the basal side of the cap body **20**, or the side of the cap body **20** at which the handles **14** are located. Thus, the person using the scissors **11** may avoid contact with the paper sections **Pa1** and **Pa2**.

(15) The guides **40a** and **40b** are arcuate. This smoothly guides the paper sections **Pa1** and **Pa2** out of the cap body **20**.

(16) The distance between the handles **14** and the basal ends of the guides **40a** and **40b** must be long so that the paper sections **Pa1** and **Pa2** guided out of the cap body **20** by the guides **40a** and **40b** do not contact the hand of the person (i.e., hand holding the handles **14**) using the scissors **11**. However, to increase the distance, the angle formed between the distal slit **23** and the second guide **40b** (or the first guide **40a**) must be decreased. As a result, it would become difficult for the second guide **40b** (or first guide **40a**) to smoothly guide the paper section **Pa1** (or paper section **Pa2**) from the distal slit **23** and out of the cap body **20**. Therefore, in the third embodiment, the guides **40a** and **40b** are curved toward the basal side of the cap body **20**. Accordingly, the paper sections **Pa1** and **Pa2** are smoothly guided out of the cap body **20** from the distal slit **23** even though the distance between the handles **14** and the basal ends of the guides **40a** and **40b** is long.

(17) The paper sections **Pa1** and **Pa2** are guided in opposite directions on the cap body **20**. The second guide **40b** guides the paper section **Pa1** away from the second blade **13b**, and the first guide **40a** guides the paper section **Pa2** away from the first blade **13a**.
460 When cutting the paper **Pa**, the second blade **13b** (or first blade **13a**) pushes the paper section **Pa1** (or paper section **Pa2**) away from the second blade **13b** (or first blade **13a**). Since the second guide **40b** (or first guide **40a**) extends in the direction in which the second blade **13b** (or first blade **13a**) pushes the paper section **Pa1** (or paper section **Pa2**), the paper section
465 **Pa1** (or paper section **Pa2**) is smoothly pushed out of the distal slit **23** toward the second guide **40b** (or first guide **40a**). Further, the paper section **Pa1** (or paper section **Pa2**) is smoothly pushed out of the cap body **20** from the second guide **40b** (or first guide **40a**).

It should be apparent to those skilled in the art that the present invention may be embodied in many other specific forms without departing from the spirit or scope of the
470 invention. Particularly, it should be understood that the present invention may be embodied in the following forms.

In each of the above embodiments, slip-guards may be provided on the lateral sides of the cap body **20**. For example, the outer surface of each side wall **21** of the cap body **20** may have a rough texture to function as a slip-guard. Such a structure also has the same
475 advantages as the above embodiments.

In each of the above embodiments, two coil springs **18** are arranged between the handles **14**. However, any number of coil springs **18**, for example one or three, may be arranged between the handles **14**.

In each of the above embodiments, a leaf spring or Belleville spring may be used as
480 the urging member in lieu of each coil spring **18**. Further, an urging member does not necessarily have to be arranged between the handles **14**.

In the first and third embodiments, the guiding portion **24** widens at locations closer

to the basal end of the cap body **20**. However, the width may be the same throughout the guiding portion **24**.

485 In each of the above embodiments, the blades **13a** and **13b** and the handles **14** of the scissors **11** may be shaped in any manner. For example, the blades **13a** and **13b** may have round distal ends. Alternatively, the stopper **14c** may be eliminated from each handle **14**. When the stoppers **14c** are eliminated from the handles **14**, the spherical portions **14a** may be hollow. Further, a mechanism for holding the handles **14** in a closed state may be provided
490 at the basal side of the handles **14**.

In each of the above embodiments, the lateral sides of the cap body **20** are curved so that the width of the cap body **20** decreases. However, the width may be changed in accordance with the design of the cap body **20**. For example, the width may be the same throughout the cap body **20**. Alternatively, the cap body **20** may be curved outward so that
495 the width of the cap body **20** increases.

In the first and third embodiments, the engaging slit **K** includes the cutout portion **26**. However, the cutout portion **26** may be eliminated.

In each of the above embodiments, the scissors **11** and the cap body **20** are held in an engaged state by the convexo-concave relationship between the engaging slit **K** and the pin
500 **15**. However, one of the blades **13a** and **13b** may be detachably engaged with the cap body **20** when the blades **13a** and **13b** of the scissors **11** are retained in the cap body **20**. For example, one of the blades **13a** and **13b** may be detachably engaged with one of the side walls **21**, and an engaging mechanism may be used to maintain the engaged state. In such a case, the blade **13a** or **13b** that is held by the engaging mechanism may be longer than the
505 other blade **13a** or **13b**. Further, the scissor cap **19** may include the engaging slit **K** of the above embodiments in addition to the engaging mechanism that detachably engages one of the blades **13a** and **13b** with the scissor cap **19**. In each of these structures provided with an

engaging mechanism that detachably engages one of the blades **13a** and **13b** with the scissor cap **19**, the movement path **C** of the intersecting point **Cp** of the two cutting edges **131a** and **131b** extends straight. The distal slit is formed along the movement path **C** with a uniform width. Such a structure stably holds the cap body **20** with respect to the blades **13a** and **13b** when the blades **13a** and **13b** are opened and closed.

In each of the above embodiments, the cap body **20** may have any structure as long as it has the two side walls **21** and the two cover walls **22**. For example, outer walls may be formed on the outer side of the side walls **21**. In such a case, the contour of the cover walls **22** corresponds to the outer surface of the outer walls. In such a case, in the cap body **20** of the third embodiment, the guides **40a** and **40b** extend to the outer walls.

In the first and third embodiments, the engaging slit **K** may have only the holding portion **25**. That is, the guiding portion **24** and the cutout portion **26** may be eliminated from the engaging slit **K**. In such a case, the holding portion **25** is formed in the basal side of the cap body **20**.

In each of the above embodiments, the engaging slit **K** may be formed in the opposing surfaces of the cover walls **22** to establish a convexo-concave relationship in the axial direction of the pin **15**.

In each of the above embodiments, the engaging slit **K** is used to engage the pin **15**. However, projections may be engaged with the pin **15**. In this case, the portions of the scissors **11** corresponding to the pin **15** are recessed in the surface of the blades **13a** and **13b** to receive the projections.

In each of the above embodiments, the distal slit **23** is straight. However, the distal slit **23** is required to extend along only part of the movement path **C**. In other words, it is only required that the distal slit **23** be formed in correspondence with at least part of the movement path **C**. For example, the distal slit **23** may be formed extending from an

intermediate section of the movement path **C** to the distal side of the cap body **20**, and the cap body **20** may be widened at portions closer to the distal end. Further, elongated holes may be formed in the cover walls **22** of the cap body **20** along an intermediate section or basal section of the hypothetical line. The hole corresponds to the distal slit **23**. Further, the cap body **20** may have more than one distal slit **23**. For example, distal slits may extend radially toward the distal side of the cap body **20** from a portion corresponding to the initial intersecting point **Cpo** when the blades **13a** and **13b** are held in the cap body **20**.

The engaging slit **K** in the second embodiment may be such that the width of the engaging slit **K** is uniform between an intermediate section of the engaging slit **K** to the distal end of the engaging slit **K**. Further, the width of the engaging slit **K** may be uniform in the longitudinal direction of the engaging slit **K**.

The basal side of the cap body **20** may have any shape as long as the blades **13a** and **13b** may be inserted therein and the engaging slit **K** may be formed therein.

In the third embodiment, the second guide **40b** does not have to be formed extending away from the second blade **13b**, and the first guide **40a** does not have to be formed extending away from the first blade **13a**. In other words, it is required only that the guides **40a** and **40b** are connected continuously with the distal slit **23** and extend away from the distal slit **23** so that the paper sections **Pa1** and **Pa2** are guided out of the cap body **20** from the distal slit **23**. For example, the two guides may be formed from the basal side of the distal slit **23** to the basal side of the cap body **20**. In this case, the guides are formed so that the side walls at the basal ends of the guides are inclined toward the outer surface of the cover walls **22** and toward the basal side of the cap body **20**. In other words, the guides extend diagonally toward the outer surface of the cover walls **22** from the basal side of the distal slit **23**.

In the third embodiment, the paper section **Pa1** (or paper section **Pa2**) is guided

(discharged) out of the first side wall **21a** (or second side wall **21b**) from the distal slit **23** along the second guide **40b** (or first guide **40a**) in the lateral direction of the cap body **20**.

560 However, the guides **40a** and **40b** are required only to guide the paper sections **Pa1** and **Pa2** out of the cap body **20** from the distal slit **23**. For example, the guides **40a** and **40b** may guide the paper sections **Pa1** and **Pa2** toward the front and rear sides of the cap body **20** with respect to the plane of **Fig. 8** or in directions opposite to the directions of the third embodiment.

565 In the third embodiment, the guides **40a** and **40b** are formed partially by the side walls **21a** and **21b**. However, the guides **40a** and **40b** may be formed entirely by the cover walls **22a** and **22b**.

In the third embodiment, the guides **40a** and **40b** are slit-like, and the accommodating space **S** of the cap body **20** is communicated to the atmosphere through the guides **40a** and **40b**. However, the guides **40a** and **40b** may be grooves that do not communicate the accommodating space **S** to the atmosphere. In this case, the distal sides of the guides **40a** and **40b** may be formed so that the bottom walls extend diagonally into the retaining space **S**.

In the third embodiment, the guides **40a** and **40b** extend from the distal slit **23** to the lateral sides of the cap body **20**. However, the guides **40a** and **40b** are required only to extend from the guides **40a** and **40b** toward the lateral sides of the cap body **20**. For example, the guides **40a** and **40b** may be formed extending to the vicinity of the lateral sides of the cap body **20**. In this case, each guide extends diagonally toward the surface of the corresponding cover wall **22** as the lateral side of the cap body **20** becomes closer.

The guides **40a** and **40b** of the third embodiment may be used in the scissor cap **19** of the second embodiment.

In the third embodiment, the guides **40a** and **40b** are curved toward the basal side of the cap body **20**. However, the guides **40a** and **40b** may be straight. Alternatively, the

guides **40a** and **40b** may be formed in a meandering manner. Such forms may be employed when the guides **40a** and **40b** are grooves.

585 In the third embodiment, the cut object is described as being a piece of paper **Pa**. However, the cut object is not limited to paper **Pa** and may be, for example, a resin sheet or film. That is, the cut object may be any article that is sheet-like and can be inserted in the distal slit **23**.

The present examples and embodiments are to be considered as illustrative and not
590 restrictive, and the invention is not to be limited to the details given herein, but may be modified within the scope and equivalence of the appended claims.